CLAIMS

The invention is claimed as follows:

1. A method for manufacturing a peritoneal dialysis solution, the method comprising the steps of:

providing a glucose polymer;

adding a reagent to the glucose polymer wherein the reagent is capable of reacting with a peptidoglycan;

determining an amount of the peptidoglycan; and

using the glucose polymer to make the peritoneal dialysis solution if it is determined that a sufficiently low level of the peptidoglycan is present.

2. The method of Claim 1, wherein the reaction with the reagent initiates a serine protease cascade.

3. The method of Claim 2, wherein the serine protease cascade includes a prophenol oxidase cascade.

4. The method of Claim 1, wherein the reagent is derived from a silkworm larvae plasma.

5. The method of Claim 1, wherein the amount of peptidoglycan is further determined by a colorimetric measurement in response to the reaction between the peptidoglycan and the reagent.

6. The method of Claim 1, wherein the sufficiently low level of the peptidoglycan is about 10 ng/mL or less.

7. The method of Claim 1, wherein the reagent is added to the peritoneal dialysis solution.

8. The method of Claim 1, further comprising the step of removing the peptidoglycan to provide the sufficiently low level of same if it is determined that the sufficiently low level of the peptidoglycan is not present.

9. The method of Claim 1, wherein the glucose polymer includes an icodextrin.

10. A method of providing peritoneal dialysis to a patient, the method comprising the steps of:

preparing a peritoneal dialysis solution utilizing a reagent to ensure that the peritoneal dialysis solution has a sufficiently low level of a peptidoglycan so as to prevent peritonitis in the patient; and

providing the peritoneal dialysis solution to the patient.

11. The method of Claim 10, wherein the sufficiently low level of the peptidoglycan includes about 10 ng/mL or less.

12. The method of Claim 10, wherein the peritoneal dialysis solution includes a glucose polymer-based solution.

13. The method of Claim 12, wherein the glucose polymer-based solution includes an icodextrin.

14. The method of Claim 10, wherein the peritoneal dialysis is selected from the group consisting of an automated peritoneal dialysis and a continuous ambulatory peritoneal dialysis.

15. The method of Claim 10, wherein the patient is monitored for peritonitis during peritoneal dialysis.

16. The method of Claim 15, wherein a dialysis effluent is collected from the patient to determine an IL-6 response that correlates to an incidence of peritonitis.

17. The method of Claim 10, wherein the reagent is used to determine if the amount of the peptidoglycan exceeds about 10 ng/mL in the peritoneal dialysis solution prior to use during peritoneal dialysis.

18. The method of Claim 10, wherein the reagent is derived from a silkworm larvae plasma.

19. A method of testing a peritoneal dialysis solution for a presence of a gram positive organism that exceeds a level sufficient to cause peritonitis, the method comprising the steps of:

adding a reagent to the peritoneal dialysis solution wherein the reagent is capable of reacting with the peptidoglycan to initiate a serine protease cascade; and

determining the amount of the peptidoglycan.

20. The method of Claim 19, wherein the serine protease cascade includes a prophenol oxidase cascade.

21. The method of Claim 19, wherein the reagent is derived from a silkworm larvae plasma.

22. The method of Claim 19, wherein the peritoneal dialysis solution includes a glucose polymer-based solution.

23. The method of Claim 22, wherein the glucose polymer-based solution includes an icodextrin.

24. The method of Claim 22, wherein the reagent is added to a glucose polymer in a raw material form that is used to make the glucose polymer-based solution.

25. The method of Claim 23, wherein the glucose polymer-based solution is tested for the amount of peptidoglycan that exceeds about 10 ng/mL.

26. A glucose polymer composition comprising a reagent that is capable of reacting with a peptidoglycan.

27. The glucose polymer composition of Claim 26, wherein the reagent is capable of reacting with the peptidoglycan to initiate a serine protease cascade.

28. The glucose polymer composition of Claim 27, wherein the serine protease cascade includes a prophenol oxidase cascade.

29. The glucose polymer composition of Claim 26, wherein the reagent is derived from a silkworm larvae plasma.

30. The glucose polymer composition of Claim 26, wherein the glucose polymer composition includes an icodextrin.